

**REMARKS:**

After entry of this Amendment, claims 1-3, 10-13, and 20-24 are pending in the subject application. Claims 1 and 11 have been amended to further distinguish the present invention over the cited references. Claims 4-9 and 14-19 have been canceled. Claims 21-24 have been added.

Reconsideration of the application as amended is respectfully requested.

The Examiner rejected claims 1-20 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Examiner asserted that the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. In particular, the Examiner asserted that support is not found in the specification for the specific ratio of a lower and upper volume to be at least 2.7, and such is considered to be new matter. In response, Applicant has deleted this limitation from claims 1 and 11.

The Examiner next rejected claims 1-20 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In particular, the Examiner stated that it is unclear is Applicant equates “substantially” with “about” or “approximately.” In response, Applicant has deleted the word “substantially” from claims 1 and 11.

The Examiner next rejected claims 1 and 4 under 35 U.S.C. § 102(e) as being anticipated by Prater, et al., United States Patent No. 6,641,742. The Examiner stated that Prater discloses a filter apparatus for filtering diesel fuel including a transparent outer housing 26, a filter element, a cover 50 covering the upper portion of the element, and a relief valve 102 in the top of the element wherein the cover is completely impervious. The Examiner further stated that the apparatus is configured such that upon reaching a predetermined differential pressure across the filter element, the relief

opens to allow fluid to flow therethrough. The Examiner then concluded that the resulting change in liquid level between the cover and the transparent housing is indicative of the need for filter replacement. Regarding the claim limitations for “for filtering a highly pressurized filter” or “for communicating a highly pressurized fluid into the housing,” the Examiner asserted that these phrases are considered to intended uses of the apparatus that do not limit the structure of the claimed invention. The Examiner further stated that the claims do not require a pump, either upstream or downstream of the filter, and that regardless of the pressure of the incoming fluid, the relief valve will open at a designated pressure differential. Furthermore, the Examiner stated that since the claims do not specify where each of the lower and upper volumes begin and end, such that the ratio therebetween is at least 2.7, that this limitation is found in the prior art by selecting whatever demarcation would result in a lower volume being 2.7 times greater than an upper volume.

Applicant first notes that claim 4 has been canceled.

Applicant has amended claim 1 to state that the cover of the housing has a bottom portion with a first inner diameter and an upper portion with a second inner diameter, wherein the first inner diameter is larger than the second inner diameter, and further that the lower predetermined volume is captured between the cover of the filter element and the bottom portion of the cover of the housing while the upper predetermined volume is captured between the cover of the filter element and the upper portion of the cover of the housing. The apparatus stated in claim 1, as amended, is not shown or described in the references of record. Accordingly, Applicant respectfully requests that the rejection of claim 1 under 35 U.S.C. § 102(e) be withdrawn.

The Examiner next rejected claims 1, 4, 7, 11, 14, and 17 under 35 U.S.C. § 102(e) as being anticipated by Smith, et al., United States Patent No. 6,841,065. The Examiner asserted that Smith discloses a filter apparatus for filtering diesel fuel or oil that includes a transparent out housing 12, a filter element 20, an impervious cover 30 covering the upper portion of the element, and a relief valve 38. The Examiner states that Smith teaches that the fluid can either be drawn into the inlet or

pushed. With regard to the phrase “highly pressurized fluid,” the Examiner stated that this phrase is considered to be an intended use. Further, the Examiner stated that “highly” is considered to be a relative term, and thus, the statement in Smith, et al. that the fluid is pushed in the apparatus is considered to be “highly pressurized” by the Examiner in relation to fluid that is under negative pressure. Finally, the Examiner concluded that a ratio of at least 2.7 between lower and upper volumes is satisfied by Smith, et al. by selecting any arbitrary demarcation, such that the ratio is satisfied.

Applicant first notes that claims 4-7, 14, and 17 have been canceled.

With respect to claim 1, Applicant has amended that claim to state that the cover of the housing has a bottom portion with a first inner diameter and an upper portion with a second inner diameter, wherein the first inner diameter is larger than the second inner diameter, and further that the bottom portion and upper portion cooperate with the cover of the filter element to define lower and upper predetermined volumes, respectively. With respect to the method stated in claim 11, Applicant has amended claim 11 to require providing a vertical housing having a transparent outer cover having a bottom portion with a first inner diameter and a top portion with a second inner diameter, wherein the first inner diameter is larger than the second inner diameter, and to further require establishing a lower and upper predetermined volume within the bottom portion and upper portion of the housing, respectively, between the outer cover of the housing and the cover of the filter element. Applicant respectfully submits that neither the apparatus stated in claim 1 nor the method stated in claim 11 is shown or described in the references of record. Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. § 102(e) be withdrawn.

The Examiner next rejected claims 1-2, 3-9, 11-12, and 14-19 under 35 U.S.C. § 103(a) as being unpatentable over Cooper, United States Patent No. 3,508,657 in view of either Prater or Smith. The Examiner asserted that Cooper teaches a filter apparatus for filtering high pressure fluids including an inlet 5, an outlet 6, a filter element 10, a relief valve for bypass flow, and an indicator of

bypass flow including a transparent cap 73 at a top of the apparatus. The Examiner then stated that Cooper does not teach an outer cover for the filter nor a configuration wherein the level of fluid in the housing serves as a visual indication that bypass flow has occurred. The Examiner then stated that both Prater and Smith teach a filter including an outer cover and transparent housing for determining the opening of a relief valve for bypass flow by visually observing the level of fluid in the housing and that it is considered by the Examiner to have been obvious to one of ordinary skill in the art at the time of the invention was made to have the filter element cover and transparent housing/visual indicating configuration of either Prater or Smith, as both references teach the benefit of accurately reflecting filter life. With regard to claims 5, 8, 15, and 18, the Examiner stated that the particular pressure of the fluid was considered obvious. With regard to claims 6, 9, 16, and 19, the Examiner stated that the limitations in those claims regarding volumes would have been obvious to a person of ordinary skill in the art by way of the ideal gas law. Finally, the Examiner asserted that claims 2 and 12 are obvious depending upon the desired operating pressure and necessary volume for fluid level indication.

With respect to claims 4-9 and 4-19, those claims have been canceled.

With respect to claim 1, Applicant has amended that claim to state that the cover of the housing has a bottom portion with a first inner diameter and an upper portion with a second inner diameter, wherein the first inner diameter is larger than the second inner diameter, and further that the bottom portion and upper portion cooperate with the cover of the filter element to define lower and upper predetermined volumes, respectively. With respect to the method stated in claim 11, Applicant has amended claim 11 to require providing a vertical housing having a transparent outer cover having a bottom portion with a first inner diameter and a top portion with a second inner diameter, wherein the first inner diameter is larger than the second inner diameter, and to further require establishing a lower and upper predetermined volume within the bottom portion and upper portion of the housing, respectively, between the outer cover of the housing and the cover of the filter

element. Applicant respectfully submits that neither the apparatus stated in claim 1 nor the method stated in claim 11 is shown or described in the references of record. Furthermore, claims 2-3 and 12 depend from claims 1 and 11, respectively, and thus should be allowable as based upon their dependence from claims 1 and 11 as well as the further limitations stated in these claims. Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. § 102(e) be withdrawn.

The Examiner next rejected claims 3 and 13 under 35 U.S.C. § 103(a) as being unpatentable over either of Smith or Prater in view of Jiang, et al., United States Patent No. 6,939,464. The Examiner asserted that Jiang teaches ribs on the outer surface of his housing cover, and that it is considered to have been obvious to one ordinarily skilled in the art at the time the invention was made to provide the ribs taught in Jiang on the outer surface of the housing of Prater in order to produce friction when removing or replacing the cover. The Examiner further stated the covers of Prater and Jiang include threads. Finally, the Examiner stated that the structure of the ribs would inherently provide support to the part of the housing covered thereby.

Applicant points out that claims 3 and 13 depend from claims 1 and 11, respectively. Applicant respectfully submits that since claims 1 and 11 are not shown or described in the references of record that claims 3 and 13 should be allowable based upon their dependence from claims 1 and 11, as well as the further limitations that these dependent claims recite. Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. § 103(a) be withdrawn.

Applicant has added new claims 21 and 23, which recite further limitations to claims 1 and 11, respectively. These new claims recite a specific ratio of a lower and upper volume defined between the outer cover of the housing and the cover of the filter element. As will be explained, these limitations are supported by Applicant's specification and thus are not new matter. Applicant's specification teaches that the cover 49 has a larger inside diameter 52 at a bottom portion of the upper chamber 16 and a smaller inner diameter 54 at an upper portion of the upper chamber 16, and

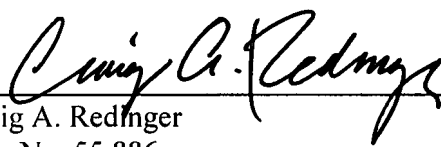
further that the spacing between the larger inner diameter and the smaller inner diameter 54 is critical, because it determines the volume of air provided within the upper chamber 16 (*Description of the Preferred Embodiment*, Par. 6). In FIG. 6 and paragraphs 7-10 of Applicant's Description of the Preferred Embodiment, a system is disclosed which operates at approximately 116 psi when the filter element 20 is clean and at approximately 188 psi when the filter element 20 is ready to be replaced. In describing the system, Applicant discloses that at the large diameter 52, a large volume 53 is defined between the cover 28 of the filter element 20 and the cover 49 of the upper chamber 16 to provide a volume in the area of the large diameter 52 of 22.05 cubic inches. Applicant goes on to describe volume 2, which is the small vertical volume in the area of the small diameter 54, as well as volume 3, which is the volume above the filter element 20, still in the area of the small diameter 54. Applicant discloses that in this example, volume 2 is 2.81 cubic inches, and volume 3 is 2.67 cubic inches. The lower predetermined volume described in the claims is volume 1, while the upper predetermined volume is the combination of volumes 2 and 3. In this example, the ratio of volume 1 to volumes 2 and 3 is approximately 4.03. Applicant's specification goes on to disclose, in FIG. 7 and paragraphs 11-14 of the Description of the Preferred Embodiment, a second example regarding an oil filter system, which operates at 60 psi when the filter media 21 is clean and at 80 psi when the filter element 20 is ready to be replaced. In this example, volume 1 is 13.59 cubic inches, volume 2 is 2.46 cubic inches, and volume 3 is 2.54 cubic inches. The ratio of volume 1 to volumes 2 and 3 in this example is approximately 2.7. Thus, Applicant's specification has disclosed a ratio between the lower predetermined volume and the upper predetermined volume in a range from 2.7 to 4.0. Accordingly, the ratio between the lower and upper volume described in the claims is supported by the specification and thus is not new matter.

Applicant has also added new claims 22 and 24. These claims recite clearance ratios, which are found at least in FIGS. 6-7 as well as paragraphs 7-14 of Applicant's Description of the Preferred Embodiment. Thus, these ratios are not new matter.

With the above amendments and discussions in mind, Applicant respectfully requests that the Examiner reconsider and withdraw the objections and rejections to the subject application and allow the subject application to proceed to issuance.

If the Examiner has any questions regarding this matter, the Examiner may contact the undersigned at (734) 662-0270.

Respectfully Submitted,  
YOUNG & BASILE, P.C.

  
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